Bruhat Bangalore Mahanagara Palike

Excecutive Engineer Road Infrastructure Yelahanka Division

Name of Work: Repair and Improvements to roads and drains and footpaths of Tatanagar Main Road in ward no. 08 Kodigehalli

RATE ANALYSIS

(Based on Schedule of Rates for the year 2018-2019 PW, P&IWTD Bangalore Circle.

Sl. No.	Description of work	Unit	SR Page No	Item No.	Basic Rate in Rs.	Loading and Unloading in Rs	Sub total	AW 6%	Total Rate In Rs.
1	Removing and refixing stone slabs of drains and pointing in CM (1:3) (P.No-27,I No-5.33 of PWD BCSR 2018-19)	Sqm	27	5.3	105.00		105.00	6.30	111.30
2	KSRRB 300-1. Earthwork excavation by manual means for roads, drains & similar works in ordinary soil excavated surface levelled and sides neatly dressed, the disposed earth to be levelled neatly after breaking of clods complete as per specifications (P.No-143 &136 ,I No-19.1&17.4& 17.1 of PWD BCSR 2018-19) 6km lead= 57+2.0x1.28x6 =72.36, including the cost of loading and unloading, disposal using private vehicle and lead off of 6km	Cum	143	19.1	130.00	72.36	202.36	12.14	214.50
3	Providing granite slabs of selected quality roughly dressed and fixed in cement mortar (1:6) including fixing curing etc., complete. (P.No-27,I No-5.31.1) 7.5cm thick	Sqm	27	5.31.1	700.00		700.00	42.00	742.00
4	KSRRB M2100-10. Providing and laying Plain cement concrete of mix 1:3:6 with OPC @ 220kgs, with crushed 40mm and down size graded granite metal coarse aggregates @0.89cum and fine aggregates @ 0.46cum, in foundation mechanically mixed, placed in foundation and compacted by vibration including curing for 14 days including cost of all materials, labour, HOM curing, form works, scaffolding and centering complete as per specifications. (P.No-222,I No-27.18)	Cum	222	27.18	5115.00		5115.00	306.90	5421.90
5	Providing and constructing granite / trap / basalt size stone masonry in foundation with cement mortar & stone hammerd dressed in courses not less than 20 cms high, bond stones at 2m. apart in each course including cost of materials, labour, HOM, curing complete as per specifications. KBS 5.1.13 cement mortar 1:6 (Page No 25., I.No.34.8.2).	Cum	255	34.8.2	4596.00		4596.00	275.76	4871.76

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Sl. No.	Description of work	Unit	SR Page No	Item No.	Basic Rate in Rs.	Loading and Unloading in Rs	Sub total	AW 6%	Total Rate In Rs.
6	Providing and laying in position plain cement concrete of mix 1:2:4 with cement @ 240kgs, with 20mm and down size graded granite metal coarse aggregates @ 0.69 cum and fine aggregtes @ 0.459cum, machine mixed, concrete laid in layers not exceeding 15 cms. thick, well compacted, for coping. Including cost of all materials, labour, HOM, curing complete as per specifications. Specification No. KBS 4.1, 4.2. (P.No-255, I No-34.11)	Cum	255	34.11	5283.00		5283.00	316.98	5599.98
7	Providing and fixing RCC Precast cover slab of 250mm thick for drain in cement concrete M20 using graded granite jelly 20mm and down size with steel reinforcement, including form work, lift charges, curing and concrete finished surfaces on both sides etc, complete and as per drawing and the directions of Engineer in-charge. (Data Rate)	Sqm	Data rate				3640.00	0.00	3640.00
8	KSRRB M300-14. Excavation for roadwork in all types of soil by mechanical means including cutting and loading to tippers, trimming bottom and side slopes, in accordance with requirements of lines, grades and cross sections, and transportation with a lead of 6.00 km and complete as per specifications MORTH Specificatio MORTH Specification No.301Loading and unloading with 5km lead= (I No-19.14,P No-143 of PWD BCSR 2018-19) , 5km lead= 2.0x1.28x5 =12.8 , including the cost of loading and unloading, disposal using private vehicle and lead off of 6km	Cum	143	19.14	41.00	12.80	53.80	3.23	57.03
9	KSRRB 300-50. Scarifying bituminous course 50mm to 75mm thick along with premix carpet / surface dressing by mechanical means attached with scarifier without disturbing the base and stacking the debris including cost of all labour charges, HOM complete as per specifications. MORTH / Chapter 3(I No-19.56,P No-146 of PWD BCSR 2018-19)	Sqm	146	19.56	39.00		39.00	2.34	41.34

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Sl. No.	Description of work	Unit	SR Page No	Item No.	Basic Rate in Rs.	Loading and Unloading in Rs	Sub total	AW 6%	Total Rate in Rs.
10	Construction of granular sub-base Grading-V as Sub-base and drainage layer by providing coarse graded crushed stone aggregates of granite/trap/basalt material, mixing by mix in place method by rotavator at OMC,spreading in uniform layers with motor grader on prepared surface and compacting with vibratory power roller to achieve the 98 % proctor density, complete as per specifications. Clause 401 of MORTH V Revision.(I No-20.6,P No-153 of PWD BCSR 2018-19)	Cum	153	20.6	1750.00		1750.00	105.00	1855.00
11	KSRRB M400-17. Providing, laying, spreading and compacting cushed stone aggregates of granite / trap / basalt to wet mix macadam specifications including pre mixing the material with water at OMC in mechanical mix plant carriage of mixed materials by tipper to site, laying in uniform layers with paver in sub-base/base course on well prepared surface and compacting with vibratory roller to achieve the desired density complete as per specifications(P.No-155,I No-20.18 of PWD BCSR 2018-19)	Cum	155	20.18	1888.00		1888.00	113.28	2001.28
12	KSRRB M 500-6, Providing and applying primer coat with SS bitumen emulsion on prepared surface of granular Base such as WBM WMM including clearing of road surface and spraying primer at the rate of 0.60 kglsqm using mechanical means complete as per specifications. As per MORTH specification clause No. 502 (P.No.158, I.No.21.6 of PWD BCSR 2018-19) issue rate Dated 01-01-2019	Sqm	158	21.6	28.00		28.00	1.68	29.68
13	KSRRB 500-2. Cleaning the existing black topped surface with brooms, soft brushes and finally dusting with old gunny bags and / or compressed air to receive bituminous treatment including cost of all materials, labour, HOM complete as per specifications. (P.No-158,I No-21.2 of PWD BCSR 2018-19)	Sqm	158	21.2	5.00		5.00	0.30	5.30
14	KSRRB 500-7. Providing and applying tack coat using 80/100 grade bitumen(VG10) on the prepared black topped surfaces at 2.5 kg per 10 sqm, heating bitumen in boiler fitted with spray set (excluding cleaning of road surface) including cost of all materials, labour, HOM complete as per specifications (P.No-158,I No-21.7 of PWD BCSR 2018-19) issue rate Dated 01-01-2019	Sqm	158	21.7	12.00		12.00	0.72	12.72

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Sl. No.	Description of work	Unit	SR Page No	Item No.	Basic Rate In Rs.	Loading and Unloading In Rs	Sub total	AW 6%	Total Rate In Rs.
15	KSRRB M500-17. Providing and laying dense graded bituminous macadam using crushed aggregates of specified grading, premixed with VG30 grade bituminous binder and, transporting the hot mix to work site, laying to the required grade, level and alignment, rolling with smooth wheeled, vibratory and tandem rollers to achieve the desired compaction in all respects complete as per specifications Clause 505 of MORTH V revisionusing 40/60 TPH capacity H.M.P. with Mechanical paver Gr-II (50 mm to 75 mm) with 4.5 % VG-30 Bitumen (P.No-160,I No-21.17.6 of PWD BCSR 2018-19) issue rate Dated 01-01-2019	Cum	160	21.17.6	6470.00		6470.00	388.20	6858.20
16	Providing and laying bituminous concrete 40mm thick with hot mix plant, using crushed aggregates of specified grading, premixed with bituminous binder and filler, transporting the hot mix to work site, laying with a paver finisher to the required grade, level and alignment, rolling with smooth wheeled, vibratory and tandem rollers to achieve the desired compaction in all respects complete as per specifications. Clause 507 of MORTH V revision as per IRC SP-53-2015. using – do – using 40-60 TPH capacity HMP with mechanical paver grading II (30-45mm) with 5.4 % of modified bituminus binder consisting of 4.97% of VG-30 bitumen (60/70 grade) and 0.43% of plastomeric thermoplastics (waste plastic) (P.No.171, I.No.21.78.12 of PWD BCSR 2018-19) issue rate Dated 01-01-2019	Cum	171	21.78.12	7594.00		7594.00	455.64	8049.64
17	KSRRB M800-13.Road Marking with Hot Applied Thermoplastic Compound with Reflectrising Glass Beads on Bituminous Surface/ Concrete Surface: Providing and laying of hot applied thermoplastic compound 2.5 mm thick including reflectorising glass beads at 250 gms per sqm area, thickness of 2.5 mm is exclusive of surface applied glass beads as per IRC:35 standards specified. The finished surface to be level, uniform and free from streaks and holes complete as per specifications. MORTH Specification No. 803(P.No-182,I No-24.15 of PWD BCSR 2018-19)	Sqm	182	24.15	429.00		429.00	25.74	454.74

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Sl. No.	Description of work	Unit	SR Page No	Item No.	Basic Rate in Rs.	Loading and Unloading in Rs	Sub total	AW 6%	Total Rate In Rs.
18	KSRRB M800-35. Supply and Installtion of Moulded Shank Raised Pavement Markers made of polycarbonate and ABS(Acrylonitrile Butadiene Styrene) moulded body and reflective panels with micro prismatic lens capable of providing total internal reflection of the light entering the lens face and shall support a load of 16000 kg tested in accordance to Specifications of Category A of MORTH Circular No RW/ NH/33023/10-97 – DO III Dt 11.06. 1997. The height, width and length shall not exceed 50 mm, 100 mm and 102 mm and with minimum reflective area of 13 Sqcm on each side and the slope to the base shall be 35 degree. The strength of detachment of the integrated cylindrical shanks, (of diameter not less than 19 mm and height not less than 30 mm) from the body is to be a minimum value of 500 Kg. Fixing will be by drilling holes on the road for the shanks to go inside, without nails and using epoxy resin based adhesive as per manufacturer's recommendation and complete as directed by the engineer.(P.No-187, I No-24.41 of PWD BCSR 2018-19)	Nos	187	24.41	337.00		337.00	20.22	357.22

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